

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings include changes to Fig 3, Fig. 6 and Fig. 7. The replacement drawing sheets, which include Fig 3, Fig. 6 and Fig. 7, replace the original drawing sheets including Fig 3, Fig. 6 and Fig. 7.

Attachment: Replacement Sheets: 3 (Three)

REMARKS

Claims 1-2 are pending in the application.

The Drawings are objected to.

Claims 1 and 2 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakurai et al. PCT Pub. NO. WO 01/74700.

The Applicants traverse the rejections and request reconsideration.

Specification

The Applicants' respectfully submit a revised Abstract to overcome the noted objection thereto.

Drawings

The Examiner has objected to the Drawings for various informalities. The informalities noted by the Examiner have been corrected. Thus, withdrawal of this objection is respectfully requested.

Claim Rejections Under 35 U.S.C. 112

Rejection of Claims 1 - 2, second paragraph, as being indefinite.

The Applicants respectfully amend claims 1 and 2 to overcome the section 112 issues raised by the Examiner.

Claim Rejections Under 35 U.S.C. 103

Rejection of Claims 1 and 2 as being unpatentable over Sakurai et al.

As noted on paragraph [0011] of the present Specification, the present invention solves a specific problem of passenger discomfort that occurs when the elevator passenger car is rapidly decelerated from the reference frequency to the leveling frequency.

To overcome the above problem, the present invention calculates an elevating distance when the elevator passenger car is decelerated from a reference frequency to a leveling frequency when the induction motor is stopped. Then the elevator passenger car is driven at the constant speed at an intermediate frequency so the calculated elevating distance is reached. After this the elevator passenger car is decelerated at a constant deceleration speed to the leveling frequency. Importantly, as noted in paragraph [0078], the frequency is changed to an arbitrary frequency when the car is moved over a short distance the comfort conditions are improved.

The teachings of Sakurai are no different from the conventional technology described in the Background section of the present Specification. For example, referring to Fig. 2(b) of Sakurai, the line A1 represents the operation pattern in a case where a deceleration stop command is input during acceleration and line B represents a case when a deceleration stop command is input during operation at the adjustable speed frequency. As can be seen from the figures, the speed pattern is very different from the pattern shown in Fig. 2 of the present Specification.

Notably, the techniques described by Sakurai do not calculate the elevating distance as in the present invention. Since Sakurai does not calculate the elevating distance as in the present invention, it also does not drive the elevator passenger car in a constant speed at an intermediate frequency so that the previously calculated distance becomes equal to an elevating distance. The Examiner incorrectly contends that this feature is taught by referring to fout1 and fout2 of Sakurai (See Office Action, page 6, lines 15-18). However, fout1 and fout2 are first and second constant speed operating frequencies. (See Sakurai col. 6, lines 7-20 and col. 8, lines 56-58). As can be seen in these passages, the elevator is maintained at a constant speed fout1 for a time period of tr1 and fout2 is maintained at a time period of tr0. In other words, there is no calculation of the elevating distance and maintaining the speed across the elevating distance.

The Examiner admits that there is no explicit teaching that an elevator passenger car reaches a deceleration starting position located at a constant distance from an arriving floor position so as to provide the means to calculate the previous distance and control the speed to adjust the elevating distance. The Examiner finds this to be equivalent to the broad concept of leveling. Thereby, the Examiner contends that a skilled artisan would have found it obvious to perform leveling.

However, the objective of the present invention is not merely leveling. It is to overcome the problem of discomfort that occurs using conventional technology when the elevator needs to be rapidly decelerated as between adjacent floors.

Sakurai teaches at best a conventional approach that is described in the background section of the present Specification. There is no mention in Sakurai of the problem of discomfort

as in the present Specification. A skilled artisan would not have thought about this problem nor the specific way of addressing this problem as in the present invention. In other words, it will not be predictable for a skilled artisan to calculate the elevating distance and perform the other steps based on the elevating distance from the teachings of Sakurai. Notably, a skilled artisan would not have found it obvious to practice the present invention from the teachings of Sakurai.

The first object of Sakurai is to stop an elevator passenger car in a constant position even when a deceleration stop command is inputted during acceleration. The second object of Sakurai is to smoothly perform switching of speed change when a deceleration stop command is inputted during acceleration.

On the contrary, the object of the present invention is to improve comfortable conditions of elevator passenger cars, which are deteriorated by changes in gravity and vibrations in such a case that the elevator passenger cars are moved over short distances such as a next floor, and also to increase floor arriving positional precision.

Therefore the stated objective of Sakurai is quite different from the present invention in object. Such being the case, a skilled artisan reading Sakurai would not have thought about the specific object of the present invention, let alone achieving the object in the specific way in which it is achieved in the present invention. Under *KSR*, the court said the Examiner must identify some reason that would have led a skilled artisan to modify the combined teachings in a particular manner to establish *prima facie* obviousness of the invention. As discussed, there is no reason that has been identified by the Examiner to modify the teaching of Sakurai in the

specific way to achieve this invention. In fact, by highlighting a different set of objectives, Sakurai is clearly teaching away from the present invention.

In the present invention, the steps of: previously calculating an elevating distance in such a case that the elevator passenger car is decelerated from a reference frequency up to a leveling frequency in a constant deceleration speed, when the induction motor is stopped; driving the elevator passenger car in a constant speed at an intermediate frequency so that the previously calculated distance becomes equal to an elevating distance when the elevator passenger car is decelerated at the constant deceleration speed from an arbitrary frequency up to the leveling frequency so as to adjust the elevating distance, are performed. Therefore, it is possible to stop an elevator passenger car at, for example, an adjacent floor or an intermediate floor (for example, a floor located between the first floor and the second floor) with improving comfortable conditions. On the contrary, in Sakurai, it is believed to be not possible to achieve this.

Claim 2 includes limitations analogous to claim 1 and is allowable for analogous reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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